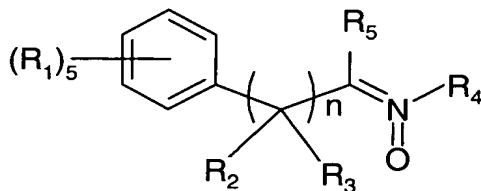


WHAT IS CLAIMED IS:

1. A compound of formula 1



I

wherein:

- (i) n is an integer with a value ranging from one to six;
- (ii) each R₁ is independently selected from:
hydrogen,
alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, aralkyl, aralkenyl,
aralkynyl,
halo, haloalkyl,
hydroxyl, alkoxyl, hydroxyalkyl, alkoxyalkoxyl, acyl, carboxylate, carboxyl,
alkanoyloxy,
nitrate, nitrite, nitrile, cyanate, isocyanate, primary amino, secondary amino, tertiary
amino, azido, carboxamido, acylamino,
thiol, sulfonyl, alkyl sulfonate, aryl sulfonate, sulfonamide, thioaryloxy, thioalkoxy,
oxygen heterocycles, nitrogen heterocycles and sulfur heterocycles;
- (iii) R₂, R₃ and R₅ are each independently selected from hydrogen, alkyl and cycloalkyl;
and
- (iv) R₄ is selected from alkyl, cycloalkyl, cycloalkylalkylene, cycloalkenyl, aryl and
aralkyl,
provided that:
 - a) when n is 1 or 2 and R₄ is tert-butyl or methyl, the R₁s, R₂, R₃ and R₅ are not all
hydrogens;

- b) when n is 1 and the R_1 s are 4-dimethylamino, 4-methyl or 4-methoxy and the rest hydrogens and R_4 is methyl, R_2 , R_3 and R_5 are not all hydrogens;
 - c) when n is 1 and the R_1 s are 3,5-di-tert-butyls and the rest hydrogens and R_4 is tert-butyl, R_2 , R_3 and R_5 are not all hydrogens;
 - d) when n is 1 and R_4 is tert-butyl or phenyl, and R_2 is methyl, the R_1 s, R_3 and R_5 are not all hydrogens;
 - e) when n is 1 and R_4 is methyl or phenyl, R_5 is methyl, the R_1 s, R_2 , and R_3 are not all hydrogens;
 - f) when n is 1 and R_2 and R_4 are both methyls, the R_1 s, R_3 , and R_5 are not all hydrogens;
 - g) when n is 1, R_2 is methyl and R_4 is cyclohexyl or phenyl, the R_1 s, R_3 , and R_5 are not all hydrogens;
 - h) when n is 1, R_1 s are 2,5-dimethyl or 2,5-dimethoxy with the remainder hydrogen and R_4 is cyclohexyl, R_3 and R_5 are not all hydrogens; and
 - i) when n is 4 and R_4 is cyclohexyl the R_1 s, R_2 s, R_3 s and R_5 are not all hydrogen.
2. The compound of claim 1 wherein the R_1 groups include hydrogens and from zero up to three nonhydrogens selected from alkyl, alkoxy, alkoxyalkoxyl, hydroxy, amino, dialkylamino, acylamino, sulfonyl, sulfonate, sulfonamide, acyl, and aryl.
 3. The compound of claim 1 wherein R_1 includes 1-5 halogens.
 4. The compound of claim 1 wherein n is an integer having a value of from 1 through 4.
 5. The compound of claim 1 wherein $n = 1$ and R_2 , R_3 and R_5 are together all hydrogen or two hydrogens and one lower alkyl; and materials in which $n=2$ or 3 and R_2 , R_3 and R_5 are all hydrogens and up to two lower alkyls.

6. The compound of claim 2 wherein $n = 1$ and R_2 , R_3 and R_5 are together all hydrogen or two hydrogens and one lower alkyl; and materials in which $n=2$ or 3 and R_2 , R_3 and R_5 are all hydrogens and up to two lower alkyls.

7. The compound of claim 5 wherein R_1 and R_4 are selected from the group consisting of:

R_1	R_4
H	$C(CH_3)_3$
4-Me	$C(CH_3)_3$
4-iso-Pr	$C(CH_3)_3$
4-OH	$C(CH_3)_3$
4-OMe	$C(CH_3)_3$
4-OCH ₂ OMe	$C(CH_3)_3$
4-OEt	$C(CH_3)_3$
4-NMe ₂	$C(CH_3)_3$
4-NHAc	$C(CH_3)_3$
4-F	$C(CH_3)_3$
4-Cl	$C(CH_3)_3$
2-SO ₃ Na	$C(CH_3)_3$
2,4-di-SO ₃ Na	$C(CH_3)_3$
3,5-di-t-Bu-4-OH	$C(CH_3)_3$
3,5-di-t-Bu-4-OCH ₂ OMe	$C(CH_3)_3$
2-OH	$C(CH_3)_3$
2-OEt	$C(CH_3)_3$

8. The compound of claim 1 selected from the group consisting of:

- Compound 2 *N-tert*-butyl-C-{2-[4-(methoxymethoxy)phenyl]ethyl} nitrone
 Compound 3 *N-tert*-butyl-C-[2-(4-hydroxyphenyl)ethyl] nitrone
 Compound 4 *N-tert*-butyl-C-[2-(4-methoxyphenyl)ethyl] nitrone
 Compound 5 *N-tert*-butyl-C-[4-(tetrahydropyran-2-yloxy) phenyl] nitrone
 Compound 6 *N-tert*-butyl-C-[2-(4-isopropoxyphenyl)ethyl] nitrone
 Compound 7 *N-tert*-butyl-C-[2-(4-ethoxyphenyl)ethyl] nitrone

Compound 8	<i>N-tert</i> -butyl-C-[2-(4-benzenesulfonyloxy)phenyl]ethyl] nitrone
Compound 9	<i>N-tert</i> -butyl-C-[2-(4-acetamidophenyl)ethyl] nitrone
Compound 10	<i>N-tert</i> -butyl-C-[2-(4-benzenesulfonamidophenyl)ethyl] nitrone
Compound 11	<i>N-tert</i> -butyl-C-[2-(4-N,N-Dibenzenesulfimidophenyl)ethyl] nitrone
Compound 12	<i>N-tert</i> -butyl-C-(5-phenylpentyl) nitrone
Compound 13	<i>N-tert</i> -butyl-C-[2-(4-isopropylphenyl)-1-methylethyl] nitrone
Compound 14	<i>N-tert</i> -butyl-C-(4-phenylpropyl) nitrone
Compound 15	<i>N-tert</i> -butyl-C-[1-(4- <i>tert</i> -butyl benzyl)-ethyl] nitrone
Compound 16	<i>N-tert</i> -butyl-C-[1-methyl-2-(4-methoxyphenyl)ethyl] nitrone
Compound 18	<i>N</i> -cyclohexyl-C-(2-phenylethyl) nitrone
Compound 19	<i>N-tert</i> -butyl-C-[4-phenylbutyl] nitrone
Compound 21	<i>N-tert</i> -butyl-C-[2-(3,5-di- <i>tert</i> -butyl-4-hydroxyphenyl)ethyl] nitrone
Compound 22	<i>N-tert</i> -butyl-C-[2-(3,5-di- <i>tert</i> -butyl-4-hydroxyphenyl)methyl] nitrone
Compound 23	<i>N-tert</i> -butyl-C-[4-methoxy-phenyl)propyl] nitrone, and pharmaceutically acceptable salts thereof.

9. A nitrone compound having at least a Ph-Z-C(R)=N(=O)- where Ph represents a substituted or unsubstituted aryl moiety, and Z is a saturated aliphatic carbon chain of one to six carbon atoms in length covalently bonded intermediate the aryl moiety and the nitrone carbon provided that:

when Z is -CH₂-CH₂-, R is H, and Ph is unsubstituted aryl, the N atom of the nitrone is not coupled to either *t*-butyl or methyl;

when Z is -CH₂-, R is H, Ph is substituted aryl with the substitutions selected from the group consisting of 4-N(CH₃)₂, 4-OCH₃, H, and 4-CH₃, the N atom of the nitrone is not coupled to methyl;

when Z is -CH₂-, R is H, Ph is substituted aryl with the substitutions selected from the group consisting of 3,5-di-*t*-butyl, 3,4-(OCH₂O)- and H, the N atom of the nitrone is not coupled to *t*-butyl;

when Z is -CH₂-, R is CH₃, and Ph is unsubstituted aryl, the N atom of the nitrone is not coupled to methyl or unsubstituted phenyl;

when Z is -CH₂-, R is H, and Ph is unsubstituted aryl, the N atom of the nitrone is not coupled to unsubstituted phenyl;

when Z is -CH(CH₃)-, R is H, and Ph is unsubstituted aryl, the N atom of the nitrone is not coupled to methyl, cyclohexyl or unsubstituted phenyl;

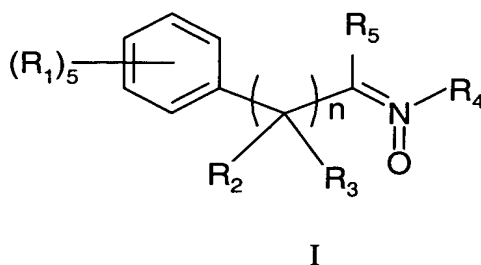
when Z is $-\text{CH}(\text{CH}_3)-$, R is H, and Ph is substituted aryl with the substitutions selected from the group consisting of 2,5-dimethoxy, and 2,5-dimethyl, the N atom of the nitron is not coupled to cyclohexyl; and

when Z is $-\text{CH}_2-(\text{CH}_2)_3-$, R is H, and Ph is unsubstituted aryl, the N atom of the nitron is not coupled to cyclohexyl.

10. The nitron compound of claim 9 wherein Z is a straight chain alkylene.
11. The nitron compound of claim 9 wherein Z is a branched chain alkylene.
12. The nitron compound of claim 10 wherein Z is methylene.
13. The nitron compound of claim 10 wherein Z is ethylene.
14. The nitron compound of claim 10 wherein Z is n-propylene.
15. The nitron compound of claim 10 wherein Z is n-butylene.
16. The nitron compound of claim 11 wherein Z is isopropylene.
17. The nitron compound of claim 9 wherein the nitron nitrogen is coupled to a lower alkyl.
18. The nitron compound of claim 17 wherein the lower alkyl is methyl.
19. The nitron compound of claim 17 wherein the lower alkyl is tert-butyl.
20. The nitron compound of claim 10 wherein the aryl moiety is phenyl.
21. The nitron compound of claim 10 wherein the aryl moiety is phenyl substituted with one or two lower alkyls.
22. The nitron compound of claim 10 wherein the aryl moiety is phenyl substituted with one or two lower alkyls and one hydroxyl.

23. The nitron compound of claim 10 wherein the aryl moiety is phenyl substituted with one or two alkoxyis.

24. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and one or more compounds of formula I as active ingredients.



wherein:

- (i) n is an integer with a value ranging from one to six;
- (ii) each R_1 is independently selected from:
hydrogen,
alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, aralkyl, aralkenyl, aralkynyl,
halo, haloalkyl,
hydroxyl, alkoxy, hydroxyalkyl, alkoxyalkoxy, acyl, carboxylate, carboxyl, alkanoyloxy,
nitrate, nitrite, nitrile, cyanate, isocyanate, primary amino, secondary amino, tertiary amino,
azido, carboxamido, acylamino,
thiol, sulfonyl, alkyl sulfonate, aryl sulfonate, sulfonamide, thioaryloxy, thioalkoxy,
oxygen heterocycles, nitrogen heterocycles and sulfur heterocycles;
- (iii) R_2 , R_3 and R_5 are each independently selected from hydrogen, alkyl and cycloalkyl; and
- (iv) R_4 is selected from alkyl, cycloalkyl, cycloalkylalkylene, cycloalkenyl, aryl and aralkyl.

25. The composition of claim 24 wherein the R_1 groups include hydrogens and from zero up to three nonhydrogens selected from alkyl, alkoxy, alkoxyalkoxy, halo, hydroxy, amino, dialkylamino, acylamino, sulfonyl, sulfonate, sulfonamide, acyl, and aryl.

26. The composition of claim 24 wherein n is an integer having a value of from 1 through 4.

27. The composition of claim 24 wherein $n = 1$ and R_2 , R_3 and R_5 are together all hydrogen or two hydrogens and one lower alkyl; and materials in which $n=2$ or 3 and R_2 , R_3 and R_5 are all hydrogens and up to two lower alkyls.

28. The composition of claim 24 wherein $n = 1$ and R_2 , R_3 and R_5 are together all hydrogen or two hydrogens and one lower alkyl; and materials in which $n=2$ or 3 and R_2 , R_3 and R_5 are all hydrogens and up to two lower alkyls.

29. The composition of claim 27 wherein R_1 and R_4 are selected from the group consisting of:

R_1	R_4
H	$C(CH_3)_3$
4-Me	$C(CH_3)_3$
4-iso-Pr	$C(CH_3)_3$
4-OH	$C(CH_3)_3$
4-OMe	$C(CH_3)_3$
4-OCH ₂ OMe	$C(CH_3)_3$
4-OEt	$C(CH_3)_3$
4-NMe ₂	$C(CH_3)_3$
4-NHAc	$C(CH_3)_3$
4-F	$C(CH_3)_3$
4-Cl	$C(CH_3)_3$
2-SO ₃ Na	$C(CH_3)_3$
2,4-di-SO ₃ Na	$C(CH_3)_3$
3,5-di-t-Bu-4-OH	$C(CH_3)_3$
3,5-di-t-Bu-4-OCH ₂ OMe	$C(CH_3)_3$
2-OH	$C(CH_3)_3$
2-OEt	$C(CH_3)_3$

30. A pharmaceutical composition comprising a pharmaceutically-acceptable carrier and as active ingredients one or more compounds selected from the group consisting of:

Compound 1 *N-tert*-butyl-C-(2-phenylethyl) nitrone

Compound 2 *N-tert*-butyl-C-{2-[4-(methoxymethoxy)phenyl]ethyl} nitrone

Compound 3 *N-tert*-butyl-C-[2-(4-hydroxyphenyl)ethyl] nitrone

- Compound 4 *N-tert-butyl-C-[2-(4-methoxyphenyl)ethyl] nitrone*
- Compound 5 *N-tert-butyl-C-[4-(tetrahydropyran-2-yloxy) phenyl] nitrone*
- Compound 6 *N-tert-butyl-C-[2-(4-isopropoxyphenyl)ethyl] nitrone*
- Compound 7 *N-tert-butyl-C-[2-(4-ethoxyphenyl)ethyl] nitrone*
- Compound 8 *N-tert-butyl-C-[2-(4-benzenesulfonyloxy)phenyl]ethyl] nitrone*
- Compound 9 *N-tert-butyl-C-[2-(4-acetamidophenyl)ethyl] nitrone*
- Compound 10 *N-tert-butyl-C-[2-(4-benzenesulfonamidophenyl)ethyl] nitrone*
- Compound 11 *N-tert-butyl-C-[2-(4-N,N Dibenzenesulfimidophenyl)ethyl] nitrone*
- Compound 12 *N-tert-butyl-C-(5-phenylpentyl) nitrone*
- Compound 13 *N-tert-butyl-C-[2-(4-isopropylphenyl)-1-methylethyl] nitrone*
- Compound 14 *N-tert-butyl-C-(4-phenylpropyl) nitrone*
- Compound 15 *N-tert-butyl-C-[1-(4-tert-butyl benzyl)-ethyl] nitrone*
- Compound 16 *N-tert-butyl-C-[1-methyl-2-(4-methoxyphenyl)ethyl] nitrone*
- Compound 17 *N-tert-butyl-C phenylmethyl nitrone*
- Compound 18 *N-cyclohexyl-C-(2-phenylethyl) nitrone*
- Compound 19 *N-tert-butyl-C-[4-phenylbutyl] nitrone*
- Compound 20 *N-tert-butyl-C-[1-(phenyl)ethyl] nitrone*
- Compound 21 *N-tert-butyl-C-[2-(3,5-di-tert-butyl-4-hydroxyphenyl)ethyl] nitrone*
- Compound 22 *N-tert-butyl-C-[2-(3,5-di-tert-butyl-4-ydroxyphenyl)methyl] nitrone*
- Compound 23 *N-tert-butyl-C-[4-methoxy-phenyl)propyl] nitrone,*
and pharmaceutically acceptable salts thereof.

31. A pharmaceutical composition comprising a pharmaceutical carrier and, as an active ingredient at least one nitrone compound, the nitrone compound comprising at least a Ph-Z-C=N(=O)- where Ph represents a substituted or unsubstituted aryl moiety, and Z is a saturated aliphatic carbon chain of one to six carbon atoms in length covalently bonded intermediate the aryl moiety and the nitrone carbon.
32. The pharmaceutical composition of claim 31 wherein Z is a straight chain alkylene.
33. The pharmaceutical composition of claim 31 wherein Z is a branched chain alkylene.
34. The pharmaceutical composition of claim 32 wherein Z is methylene.

35. The pharmaceutical composition of claim 32 wherein Z is ethylene.
36. The pharmaceutical composition of claim 32 wherein Z is n-propylene.
37. The pharmaceutical composition of claim 32 wherein Z is n-butylene.
38. The pharmaceutical composition of claim 32 wherein Z is isopropylene.
39. The pharmaceutical composition of any of claims 24-38 wherein the carrier is an injectable carrier.
40. The pharmaceutical composition of any of claims 24-38 wherein the composition is a solid carrier.
41. The pharmaceutical composition of any of claims 24-38 wherein the composition is a unit dose form.
42. A method for treating or preventing inflammation in a mammal comprising administering said mammal an effective inflammation treating or preventing dose of a pharmaceutical composition according to any of claims 24-41.
43. A method for treating or preventing neuropathic pain in a mammal comprising administering said mammal an effective neuropathic pain treating or preventing dose of a pharmaceutical composition according to any of claims 24-41.
44. A method for the treatment of traumatic injury to the brain or spinal cord of a mammal comprising administering said mammal an effective brain or spinal cord injury treating dose of a pharmaceutical composition according to any of claims 24-41.
45. The method of any of claims 42-44 wherein the mammal is a human.